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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/669,098	09/25/2000	BILLY G MOON	062891.0466	3457

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EXAMINER
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LY, ANH VU H

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 06/16/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/669,098

Applicant(s)

MOON ET AL.

Examiner

Anh-Vu H Ly

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-15, 17-25, 27-34 and 36-39 is/are rejected.
- 7) ☒ Claim(s) 6, 16, 26 and 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 7-11, 17-21, 27-31, and 36-39 are rejected under 35 U.S.C. 102 (b) as being anticipated by Helm et al (US Patent No. 5,719,871). Hereinafter, referred to as Helm.

With respect to claims 1, 11, 21, and 31, Helm discloses in Fig. 2, a diversity radio communication system comprising plurality of base stations 202-204 communicating simultaneously with the communication unit 201 (a wireless interface operable to receive information from a mobile unit using a wireless link between the wireless interface and the mobile unit). Further, as shown in Fig. 2, the base stations 202-204 transmit the encoded information to the comparator via the wire lines 212-214 (a network interface operable to communicate the graded packet to the core network). Helm discloses in Fig. 3, a comparator performing diversity voting on the encoded data frames (generate a graded packet encoding the information and the metric, wherein the metric enables elements of a core packet network to select between multiple packets encoding information). Herein, the encoded data frames including the data words and quality metrics (determining a metric associated with the wireless link)

Art Unit: 2667

With respect to claims 7, 17, 27, and 36, Helm discloses (col. 5, lines 1-8) that the base stations 202-204 determine signal quality metrics for all of the code words. The signal quality metrics comprise error statuses; however, signal quality metrics might comprise SNR, RSSI, BER, or path metric values resulting from Viterbi decoding of trellis encoded signals (wherein the metric is a selected one of a signal strength, signal to noise ratio, bit error rate, and carrier to noise ratio).

With respect to claims 8, 18, 28, and 37, Helm discloses in Fig. 3, the encoded information including the code words and quality metrics such as E11, E21, E31, ET1, ET2, and ET3 to enable the comparator to select the highest quality code words from among received code words (processor is operable to encode an identifier in the graded packet, wherein the identifier enables the elements of the core packet network to match the graded packet with other graded packets encoding the information).

With respect to claims 9, 19, 29, and 38, Helm discloses in Fig. 3, the code words in the data frames including the information communicated from the communication unit 201 to the base stations (wireless interface is operable to receive information from the mobile unit as a packet encoding the information).

With respect to claims 10, 20, 30, and 39, Helm discloses in Fig. 2, a diversity radio communication system for communicating voice over the air (information comprising voice information associated with a communication session).

Art Unit: 2667

2. Claims 1, 8-11, 18-21, 28-31, and 37-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Derango et al (US Patent No. 5,867,491). Hereinafter, referred to as Derango.

With respect to claim 1, 11, 21, and 31, Derango discloses in Fig. 1 a multi-channel simulcast system comprising a number of remote sites 41-43, wherein, each remote site comprising a plurality of transceivers 45 for communicating wirelessly with subscribers (not shown) (a wireless interface operable to receive information from a mobile unit using a wireless link between the wireless interface and the mobile unit). Derango discloses (col. 4, lines 30-40) that concurrently, other radio channels assigned to the same packet voting server 25 may become active, with the remote sites sending their received information packet stream to the voting server 25. All packets (generate a graded packet encoding the information and the metric, wherein the metric enables elements of a core packet network to select between multiple packets encoding the information) sent to the voting servers 25 must have either an implicit or explicit indication of radio channel number, voting session identifier, or information packet stream number as well as an indication of position of the packet (determining a metric as considered by the examiner) within the packet stream on the air interface (associated with the wireless link). As shown in Fig. 1, each remote site including a site controller/WAN access for connecting to the packet voting servers 25 (a network interface operable to communicate the graded packet to the core packet network).

With respect to claims 8, 18, 28, and 37, Derango discloses (col. 4, lines 48-53) that for each voting session in the packet voting server, one vote occurs on all the packets from the same position (an identifier) in the packet stream from the same radio channel (processor is operable to

Art Unit: 2667

encode an identifier in the graded packet, wherein the identifier enables the elements of the core packet network to match the graded packet with other graded packets encoding the information).

With respect to claims 9, 19, 29, and 38, Derango discloses in Fig. 1, a multi-channel simulcast system for transmitting packets of data. Therefore packets include the communicated information (wireless interface is operable to receive the information from the mobile unit as a packet encoding the information).

With respect to claims 10, 20, 30, and 39, Derango discloses in Fig. 1, a multi-channel simulcast system comprising a number of remote sites 41-43, wherein, each remote site comprising a plurality of transceivers 45 for communicating wirelessly with subscribers. Herein, voice, data or multimedia may be included (information comprising voice information associated with a communication session).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-5, 12-15, 22-25, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helm et al (US Patent No. 5,719,871) in view of Bomar et al (US Patent No. 6,535,738). Hereinafter, referred to as Helm and Bomar.

With respect to claims 2-4, 12-14, 22-24, and 32-33, Helm discloses in Fig. 2, a diversity radio communication system comprising plurality of base stations 202-204 communicating simultaneously with the communication unit 201. Helm does not disclose the base station monitors the metric associated with the wireless link; determine that the metric associated with the wireless link has degraded below a predetermined threshold; withdraw from a selection group associated with the mobile unit; and instruct the wireless interface to discontinue receiving further information from the mobile unit. Bomar discloses (col. 5, lines 21-33) that the base station (CDMA system, herein comprising spreading code such as Walsh code and passband frequency) receives signal quality measurements from the mobile station (herein the base station monitors the received measurements associated with the wireless link) and determines which base stations should be in the active set (selection group) based on the received measurements. Whereby, the signal quality measurements are being compared to different level of thresholds (col. 2, line 58 – col. 5, line 18) (determine that the metric associated with the wireless link has degraded below a predetermined threshold). Upon making a determination in accordance to the described technique (col. 2, line 58 – col. 5, line 18), the primary base station or second base station transmits an message indicating to the mobile station which base stations should be included in the active set (processor to instruct the mobile unit to discontinue receiving information from the base station on a Walsh code/frequency combination). Herein, if the measured signal quality associated with a base station is below a threshold that base station is not included in the active set (withdraw and instruct the wireless interface to discontinue receiving information from the mobile unit). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the features of monitoring, determining,

Art Unit: 2667

withdrawing and instructing the wireless interface from receiving information transmitted by the mobile unit in Helm's system, as suggested by Bomar, to improve system capacity.

With respect to claims 5, 15, 25, and 34, Helm discloses in Fig. 2, base stations 202-204 concurrently receive information from the communication unit 201. Herein, such base stations are considered as a selection group by the examiner (selection group comprising a plurality of BTS each receiving information from the mobile unit).

***Allowable Subject Matter***

4. Claims 6, 16, 26, and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bocci et al (US Patent No. 5,491,688) discloses method for providing a favorable signal representation.

Bernstein et al (US Pub No. 2002/0027890) discloses methods and apparatus for inter-frequency handoff in a wireless communication system.

Dolan (US Patent No. 6,628,632) discloses method and apparatus for permitting direct handoff between base stations in a wireless network.




Hoo (US Patent No. 5,794,149) discloses base station controlled handoff method and apparatus.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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